

# EMS and the Next Generation Air Transportation System

Presented to: Federal Environmental Symposium  
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Date: June 18, 2008



Federal Aviation  
Administration



# Presentation Outline

- **What is NextGen?**
- **Who is involved?**
- **Why is Environment Important?**
- **What is the role of Environmental Management Systems?**



# NextGen is the transformation of the National Airspace System to meet 3X demand by 2025

- **Guided by NextGen Integrated Plan**
  - Establishes National Goals
  - Sets context for Transformation
  - Sets direction for Transformation
    - Safety
    - Security
    - Airport Infrastructure
    - Environmental protection
    - Air Traffic Management
  - Creates governance model for multi-agency cooperation



# Joint Planning and Development Office - NextGen Agency Composition

- Federal Aviation Administration
- National Aeronautics and Space Administration
- Department of Transportation
- Department of Defense
- Department of Homeland Security
- Department of Commerce
- White House Office of Science and Technology Policy

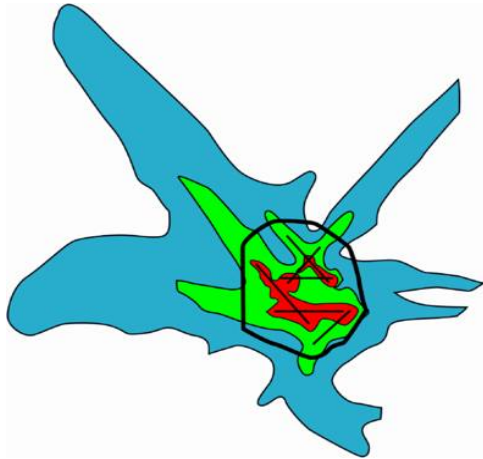


# Primary Strategies

- **Develop Airport Infrastructure to Meet Future Demand**
- **Establish an Agile Air Traffic System**
- **Establish a Comprehensive, Proactive Safety Management Approach**
- ***Develop Environmental Protection that Allows Sustained Aviation Growth***
- **Harmonize Equipage and Operations Globally**



# The Challenges



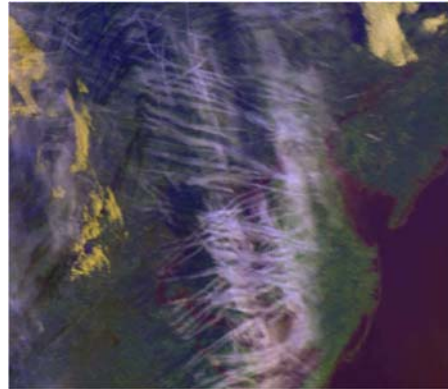
## Community Noise Impacts

Dealing with significant aircraft noise impacts around airports



## Water Quality

Reducing significant impacts on local water quality



## Global climate

The potential impact of aviation on global climate



## Air Quality

Limiting or reducing impact of aviation on local air quality





# EMS Framework for NextGen

- **Environmental Goals of NextGen**
  - Absolute reductions in significant impacts to community noise, local air quality, and water quality
- **EMS framework calls for EMS implementation among affected aviation community**
  - Feds, airports, airlines, engine and airframe manufacturers



# EMS Framework for NextGen

- **Potential Environmental Aspects**
  - Improved airframe and engine technologies
  - Alternative fuels
  - Advanced aircraft avionics
  - Flight Management Systems
  - Required Navigation Performance (RNP)
  - Energy management guidance
  - Development of airport infrastructure
  - Improved surface operations





# EMS Framework for NextGen

- **NextGen EMSs will establish objectives and targets for noise, emissions (air quality), water quality, and energy intensity**
- **EMS monitoring will assist with determining progress in meeting environmental goals of absolute reductions**



# EMS Framework for NextGen

- **Begin with incorporation of NextGen initiatives in FAA EMSs**
  - Lead by example
    - Air Traffic Organization (33,000 employees)
    - Aviation Safety (7,000 employees)
    - Airports (500 employees)
    - Commercial Space Transportation (70 employees)
    - Staff Offices (4,000 employees)
- **Provide incentives and encouragement for industry EMS development**



# Airport and Airway Trust Fund

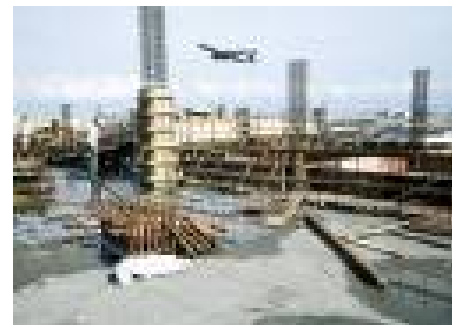
- **Airport and Airway Trust Fund**

- Created by the Airport and Airway Development and Revenue Act of 1970
- Funded by passenger ticket tax, International arrival and departure tax, domestic cargo tax, and fuel tax
- Finances the acquisition, establishment and improvement of air navigational facilities, and airport development



# Airport Improvement Program

- The Airport and Airway Trust Fund provides funding for FAA's **Airport Improvement Program (AIP)**
- AIP funds planning, airport development, land acquisition, and noise program implementation projects
- **EMS** development is considered “planning” under the AIP



# Advisory Circular: EMSs for Airports

- Provides Federal financial aid (AIP funds) to sponsors of “public use large and medium hub airports” for development of an EMS
- Sponsor must keep EMS current without further Federal financial aid
- Asked to consider objectives and targets for noise, air and water quality, and energy



## Advisory Circular

Subject: ENVIRONMENTAL MANAGEMENT SYSTEMS FOR AIRPORT SPONSORS

Date: 09/26/2007  
Initiated by: APP-400

AC No: 150/5050-5  
Change:

**1. THE PURPOSE OF THIS ADVISORY CIRCULAR.** This Advisory Circular (AC) provides guidance to airport sponsors that develop Environmental Management Systems (EMS). It provides guidance to airport sponsors on the needed parts of an EMS.

Several recognized methods exist for developing an acceptable EMS, including standards developed by the Environmental Protection Agency and the International Organization for Standardization (ISO) 14001. ISO 14001 requirements for an EMS can be used for certification, registration, and/or self-declaration. An EMS must satisfy one of the recognized standards if an airport sponsor is seeking Federal financial support for its development. An airport sponsor that receives Federal aid to develop an EMS must keep the EMS current, without further Federal financial aid.

**2. WHAT THIS AC CANCELS.** There are no publications that this AC cancels.

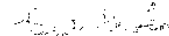
**3. WHO THIS AC AFFECTS.** This AC affects sponsors of public use large and medium hub airports that choose to develop and complete an EMS at the airport.

**4. RELATED READING MATERIAL.**

- International Organization for Standardization, Standard 14000 series (most current version).
- International Organization for Standardization, Standard 9000 series (most current version), (including 19011-95, guidelines for quality and/or environmental management system auditing).
- Fact sheets and guidance on preparing an EMS, Office of the Federal Environmental Executive.
- Environmental Protection Agency's EMS guidance, models, reports and training materials.

**5. COMMENTS OR SUGGESTIONS.** Send comments or suggestions for improving this AC to: Manager, Airport Planning and Environmental Division  
Federal Aviation Administration  
ATTN: APP-400  
800 Independence Avenue, S.W.  
Washington, DC 20591

**6. COPIES OF THIS AC.** The Office of Airport Planning and Programming makes its AC's available online at [http://www.faa.gov/sep/airports/aircraft/airports/res/aces/advisory\\_circulars/](http://www.faa.gov/sep/airports/aircraft/airports/res/aces/advisory_circulars/).



Dennis Deloren  
Director, Office of Airport Planning and Programming



# Challenges and Conclusion

- **Incentives for Development of Industry EMSs**
- **Collection and Management of Environmental Performance Information**
- **Aligning Dynamic Environmental Management System with Static National Environmental Policy Act Processes**

